

**Commonwealth of Kentucky
Division for Air Quality**

RESPONSE TO COMMENTS

ON THE CONDITIONAL MAJOR DRAFT PERMIT F-06-066

Marathon Petroleum Company, LLC

Marine Repair Terminal

803 Schenkel Lane

Frankfort, KY 40601

Date: January 31, 2007

Sukhendu K. Majumdar, Reviewer

SOURCE ID: 021-019-00016

AGENCY INTEREST #: 35218

ACTIVITY ID: APE20060001

SOURCE DESCRIPTION:

Marathon Petroleum Company LLC operates a Marine Terminal (MRT) in Catlettsburg, KY. The facility submitted a Title V operating permit application in 1998, based on the potential-to-emit (PTE) for volatile organic compounds (VOC) of greater than 100 tons per year. The Title V permit was issued by the Division for Air Quality in December 22, 1999. A permit renewal application was submitted by the facility six months before the expiration of the permit in 2004. After several reviews of the application DAQ suggested to develop a calculation methodology to estimate barge “degassing” emissions during the barge cleaning cycle. Based on the new emission estimation, it was determined that the facility qualifies for the Federally Enforceable State Operating Permit (FESOP). Marathon Petroleum Company LLC submitted a revised application for Marine Repair Terminal at Catlettsburg on October 19, 2006.

PUBLIC AND U.S. EPA REVIEW:

On December 9, 2006, the public notice on availability of the draft permit and supporting material for comments by persons affected by the plant was published in *The Ashland Independent* in Ashland, Kentucky. The public comment period expired 30 days from the date of publication.

Comment received

Comments were received from the source on January 5, 2006. Attachment A to this document lists the comments received and the Division’s response to each comment. Minor changes were made to the permit as a result of the comments received, however, in no case were any emissions standards, or any monitoring, recordkeeping or reporting requirements relaxed. Please see Attachment A for a detailed explanation of the changes made to the permit.

ATTACHMENT A

Response to Comments

Comments received from Mr. Stephen C. Chalupa, Environmental Professional, Marine Repair Terminal, Marathon Petroleum Company, LLC.

- 1) Attachment A – Permit Application Summary Form – Page 2 – The actual 2005 emissions (tpy) is incorrect. The listed emissions do not match the 2005 Emission Inventory Summary submitted to KYDEP. MPC recommends that the KY Division of Air Quality update their emission data with the summary submitted (July 5, 2006) to update the KY Emissions Inventory database.

Division's response: The actual emissions (tpy) showed in the Page 2 of the summary form are correct. Emission Inventory Survey 2005 report was submitted by the Division on June 18, 2006 and was agreed by you in a letter dated June 30, 2006. No change was made to the summary form 2005 actual emission column.

- 2) Attachment A – Permit Application Summary Form – Page 2 – The list of equipment at the Marine Repair Terminal needs to be updated to include two (2) natural gas fired boilers to provide hot water to wash barges. **NOTE: MPC has purchased a new boiler to replace the existing out of service boiler and will be installing it in the near future. NOTE: MPC is developing emission estimates for the addition of this emission unit to the permit.** Also, bullet d) indicates that MRT has two (2) internal floating roof storage tanks to store gasoline and # 2 fuel oil. Actually, these tanks are permitted to store light and/or heavy rerun.

Division's response: One natural gas boiler, Emission Unit B1 (Boiler #3), was in the draft permit. The Division has received an application for a minor amendment on January 16, 2007 for a new boiler, which was included in the final permit V-06-066. Bullet a) and d) were revised in the Summary Application Form.

- 3) Attachment B – Permit Statement of Basis – Page 1, Paragraph 1, sentence 5 – MPC proposes removing the word “But” and beginning the sentence with “After”.

Division's response: Comment acknowledged, change made.

- 4) Attachment B – Permit Statement of Basis – Page 1 – See comment # 2.

Division's response: Comment acknowledged, change made.

- 5) Attachment B – Permit Statement of Basis – Page 2 – Control and Efficiency – This section states that the design efficiency of the thermal oxidizer is 99.6%. This statement is incorrect. The 99.6% value represents an average destruction efficiency of three (3) tests conducted to demonstrate compliance on January 11, 2002. The design efficiency of the thermal oxidizer is 90%.

Division's response: Comment acknowledged, change made.

- 6) Attachment B – Permit Statement of Basis – Page 2 – Control and Efficiency – The final sentence states that the oxidizer shall be operational during gasoline and light liquid hydrocarbon degassing and barge cleaning. MPC proposes removing the reference to “light liquid hydrocarbons”. Typically, MPC routes all vapors from gasoline and benzene to the thermal oxidizer but there are some light liquid hydrocarbons that are not destroyed by incineration, such as cumene. Therefore, there may be times when MPC would be required to route vapors to the incinerator but the actual emissions would not be accurately accounted. Also, the “Conditional Major” permit does not allow MPC to allow emissions greater than 90 tons per year (tpy) of volatile organic compound (VOC).

Division's response: Comment acknowledged, change made.

- 7) Attachment B – Permit Statement of Basis – Page 2 – Periodic Monitoring – This section states that the thermal oxidizer shall be monitoring to comply with a 99.0% destruction efficiency of VOCs and HAPs. MPC proposes compliance to a 90 % destruction efficiency due to the requirement in the State Implementation Plan (SIP) that MRT implement vapor collection and control equipment with an overall efficiency of at least 90% for its barge cleaning operation.

Division's response: Comment acknowledged, change made.

- 8) Attachment C – DRAFT PERMIT – Page 2 of 24 – MPC requests clarification of the Compliance Demonstration Method for Boiler # 3. It is our understanding that as long as MPC fuels this unit with Natural Gas there will not be a requirement to monitor for SO₂, particulates and opacity. In addition, it is our understanding that no reporting requirements are applicable to boiler # 3 as long as we fuel this unit with Natural Gas, except for the Natural Gas combusted by each boiler during each month, (Page 3 of 24).

Division's response: Your understanding is correct. The draft permit was written that way.

- 9) Attachment C – DRAFT PERMIT – Page 4 of 24 – Paragraph one (1) states, When gasoline and petrochemical carrying barges are degassed before cleaning, the vapors from the degassing are diverted to the thermal oxidizer to reduce VOC and HAP emissions. This statement is not entirely correct. Some petrochemical products, such as cumene do not emit vapors that can be destroyed by incineration. Therefore, these vapors are not routed to the thermal oxidizer. In addition, MPC proposes the insertion of “that require” after the words carrying barges in the third sentence of paragraph one.

Division's response: Comment acknowledged, change made.

- 10) Attachment C – DRAFT PERMIT – Page 4 of 24 – Testing Requirements – Sentence # 2 requires MPC to test the thermal oxidizer for destruction efficiency at the minimum operating temperature at low and high vapor concentrations. MPC degasses and cleans barges carrying products with a very wide range of destruction requirements. It would be impracticable to test each potential product vapor stream for at a minimum operating

temperature at low and high vapor concentrations. MPC proposes the development of an operating temperature range that would suffice for vapors from all products that are routed to the thermal oxidizer at low or high concentrations.

Division's response: Comment acknowledged, change made to reflect the range of temperature between 1375 and 1800 deg F to the oxidizer to maintain the desired destruction efficiency for all vapors from all products routed to the oxidizer.

- 11) Attachment C – DRAFT PERMIT – Page 4 of 24 – Specific monitoring Requirements – MPC proposes the removal of the words “light liquid product” because not all products emit vapors that require routing to the thermal oxidizer.

Division's response: Comment acknowledged, change made.

- 12) Attachment C – DRAFT PERMIT – Page 5 of 24 – Specific Recordkeeping Requirements – Item b. should be revised to require that records need to be kept when the thermal oxidizer is in operation. MRT does not operate the thermal oxidizer unless they are routing vapors to it for destruction during degassing operations.

Division's response: Comment acknowledged, change made.

- 13) Attachment C – DRAFT PERMIT – Page 5 of 24 – Specific control Equipment Operating Conditions – Please note this unit is designed to operate within a temperature range which makes it impossible to define/determine an exact low temperature for a 90% or greater destruction efficiency, at low and high concentrations, to be established for every potential product that may be carried on a petrochemical barge.

Division's response: Comment acknowledged.

- 14) Attachment C – DRAFT PERMIT – Page 6 of 24 – Update the barge capacity specifications to reflect 10,000 barrels to 30,000 barrels.

Division's response: Comment acknowledged, change made.

- 15) Attachment C – DRAFT PERMIT – Page 7 of 24 – For consistency, MPC proposes identification of the oil-water separator tanks to be Tk-1 and Tk-3. This is the numbering that has been used for many years and it will be easier for the facility personnel to relate to the current tank numbers.

Division's response: Comment acknowledged, change made.

- 16) Attachment C – DRAFT PERMIT – Page 8 of 24 – For consistency, MPC proposes identification of the light and heavy rerun storage tanks to be Tk-2 and Tk-4. This is the numbering that has been used for many years and it will be easier for the facility personnel to relate to the current tank numbers.

Division's response: Comment acknowledged, change made.

- 17) Attachment C – DRAFT PERMIT – Page 13 of 24 – MPC proposes the addition of the following insignificant activities to the description list. The activities are as follows: Occasional tank cleaning and the use of portable storage tanks or frac tanks.

Division's response: Comment acknowledged, change made.

CREDIBLE EVIDENCE:

This permit contains provisions which require that specific test methods, monitoring or recordkeeping be used as a demonstration of compliance with permit limits. On February 24, 1997, the U.S. EPA promulgated revisions to the following federal regulations: 40 CFR Part 51, Sec. 51.212; 40 CFR Part 52, Sec. 52.12; 40 CFR Part 52, Sec. 52.30; 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12, that allow the use of credible evidence to establish compliance with applicable requirements. At the issuance of this permit, Kentucky has only adopted the provisions of 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12 into its air quality regulations.